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Abstract

Many politicians as well as journalists are using Twitter regularly and are connected on the microblogging platform. We use the agenda-building approach as conceptual background because political tweets can serve as information subsidies if they are used by journalists, indicating an agenda-building influence by politicians. It has not yet been systematically investigated which functions of a political tweet make it more likely for it to be used by a journalist and to which extent the journalist's Twitter network plays a role in this process. We analyze which functions of political tweets explain their use as information subsidies and integrate the influence of the journalists' Twitter networks. The study is based on a unique combination of an online survey of Swiss journalists in 2014 with an analysis of the journalists' Twitter metrics. It demonstrates that political tweets are most likely to be used by journalists if they can quote the politicians' tweets, which fosters their significance as information subsidies. Also, journalists who have many politicians as followers perceive that they can influence politicians they do not know personally. This underscores that if the Twitter network is included in the analysis of agenda-building processes potential reciprocal influences can be detected.

Keywords: Agenda-building, journalism, survey, Twitter, Twitter metrics

Journalists' use of political tweets: Functions for journalistic work and the role of perceived influences.

Online media have changed journalistic work routines in various ways, one of which constitutes an additional means for journalists to source information for their daily work. A recent overview of studies on journalists' use of online sources concludes that journalists frequently use online sources; and Twitter is popular (Lecheler and Kruikemeier 2015). Journalists pick tweets and use them for their articles. Among these tweets, many are written by politicians or political parties, especially during elections (Broersma and Graham 2012).

According to agenda-building theory, media coverage is naturally influenced by information sources (e.g. politicians) (Berkowitz 1987; Weaver et al. 2004). If their messages are incorporated by journalists' in their work completely substituting journalistic newsgathering activities the messages constitute information subsidies (Gandy 1982). This can be problematic if journalists' decisions on what is noteworthy for media coverage are more dependent on what messages they receive from politicians and not what they investigate themselves.

Online content offers further information subsidies journalists can potentially use (Kioussis et al. 2013). While the emergence of Twitter does not completely change journalistic working routines, Twitter still has the potential to change the way journalists source news (Artwick 2013; Broersma and Graham 2012). If tweets by politicians are incorporated in journalistic work and eventually in the media coverage without any further newsgathering on the political issues discussed in those tweets, they are used as information subsidies (Gandy 1982). The agenda-building approach is thus a useful framework for investigating the potential influence of political tweets on journalists' work.

Against the backdrop of agenda-building theory, the functions of political tweets for journalists have been investigated in a first seminal study through qualitative interviews (Parmalee 2014). However, it has not yet been systematically analyzed on a broader, quantitative basis which functions of a political tweet make it more likely for it to be used by a journalist. Also, the extent to which the journalist's Twitter network plays a role in this process has not yet been studied as previous studies either draw on surveys of journalists (e.g. Hedman 2014) or analyze their tweets or the media coverage (Artwick 2013; Broersma and Graham 2012). Since Twitter is an interactive medium, reciprocal processes between journalists and politicians are also possible. As reciprocal influences are part of the agenda-building concept (Cobb and Elder 1983; Kingdon 1995; Fahmy et al. 2011) we also take potential influences from journalists on politicians through Twitter into account.

The study thus tries to remedy three shortcomings in the current research on journalists' use of political tweets in the context of agenda-building. First, it systematically tests which functions of political tweets influence their use by journalists; second, it combines survey and Twitter data of journalists offering a new methodological approach to the research question; and third, it conceptualizes agenda-building as a broad concept including reciprocal processes which makes the analysis of the Twitter metrics and other directions of influence reasonable.

Theoretical Background: Agenda-building and Twitter

When analyzing the influence of Twitter on journalistic work the two concepts of agenda-building and information subsidies are relevant. Agenda-building conceptualizes the "overall process of creating mass media agendas" (Berkowitz and Adams 1990, 723) and more specifically how the media and journalists select and use information and information sources (Nisbet 2008). This process involves different groups: politicians, other societal actors (e.g., nonprofit organizations, corporations), journalists, and citizens (Kioussis et al. 2013). Related to the agenda-building approach is the concept of information subsidies (Gandy

1982): “An information subsidy is an attempt to produce influence over the actions of others by controlling their access to and use of information relevant to those actions” (Gandy 1982, 61). Thus, scholars argue that if messages provided by information sources are included in the media coverage, instead of journalists gathering information on political issues themselves and critically assessing them, this can be described as information subsidies (Fahmy et al. 2011; Gandy 1982). Information subsidies can be of concern because information disseminated by politicians get attention in the media without an assessment by journalists who may have added other information on a political issue if they had done proper journalistic research and not only relied on information subsidies.

The information subsidy approach mainly considers one direction of influence in the agenda-building process—influence from the political system on journalists and media coverage. Political communication researchers followed this approach by analyzing the influence of political public relations on media coverage (Berkowitz 1987; Kiouisis et al. 2015; Kiouisis et al. 2006; Turk 1986), investigating the influence of press releases by politicians or political parties on journalists’ information selection and news media coverage (Lancendorfer and Lee 2010; Turk 1986). That there is an influence of political information on journalism is natural since journalists need political sources for their coverage. However, the question is if this kind of information substitutes journalists’ own newsgathering activities. Press releases are one of the most common forms of information subsidies as they simplify journalists’ search for information about a certain political issue. Empirical evidence is quite strong that influences through information subsidies on journalistic news selection and media coverage exist. Particularly during election times, it was demonstrated that public relations efforts by political candidates—also in the online sphere— influence media coverage (Kiouisis et al. 2015; Kiouisis et al. 2006; Lancendorfer and Lee 2010). Similar results can be found for routine, nonelection communication by political institutions, such as the U.S. Congress (Kiouisis et al. 2011). Such agenda-building effects are found not only in representative democratic systems but also in direct democratic systems and during referendum campaigns (Wirth et al. 2010).

Following this approach, online content has become an additional form of information subsidy journalists can potentially use. Journalists are increasingly using nonofficial information sources online, e.g. from blogs, instead of official information subsidies, such as press releases (Kiouisis et al. 2013). Twitter constitutes one of these online sources and appears to be one of the most important ones with regard to our research question as politicians and journalists interact closely on Twitter (Ausserhofer and Maireder 2013; Verweij 2012). For politicians, Twitter is an attractive channel of communication as they can interact with citizens directly, overcome the traditional gatekeeping function of mass media, and reach a potentially large electorate (Marcinkowski and Metag, 2014; Rauchfleisch and Metag 2016). Also, many journalists in Western countries have a Twitter account and use it quite actively (English 2014; Hedman 2014; Vis 2013). Journalists can use tweets by political actors as information subsidies because tweets make it easier for journalists to research information on certain issues (Moon and Hadley 2014). Regarding agenda-building processes, what kind of information political actors disseminate via Twitter is relevant. In most countries, politicians use Twitter mostly unidirectionally. They tweet information about political issues or events and do not engage in active discussions very often (Elter 2013; Graham et al. 2013). Still, journalists can use the information politicians disseminate via Twitter as information subsidies (Kiouisis et al. 2013: 655).

Broersma and Graham (2012) identified four functions of tweets in news texts by conducting a content analysis of British and Dutch newspapers. Tweets were used as a trigger for a news story, as an illustration of news events, as a stand-alone quotation, or even as means of voters asking questions in an interview-like style (Broersma and Graham 2012).

Similarly, most agenda-building studies use content analysis to search for correlations between the coverage of certain issues in the media and their salience in the political arena (e.g., through political press releases) (Nisbet 2008; Weaver and Elliott 1985). However, these analyses study only the final product of the agenda-building process (the published media content) and do not really grasp the journalistic decisions behind the process, or as Nisbet (2008) puts it: “[T]here remains some degree of uncertainty regarding the actual inputs to the process or the specifics of the process itself” (para. 13). Thus, content analysis does not fully explain the journalists’ rationale and individual beliefs about which functions a political tweet must have to be useful for their work. Shining more light on this rationale and following the agenda-building approach, a seminal study by Parmelee (2014) investigated in semi-structured interviews with American journalists in what circumstances and why they would use tweets by politicians for their work and incorporate them in media coverage. Journalists stated that they used tweets by politicians if they could be quoted easily if they could help find other sources, if they provided the possibility to check facts or get background information, or if they provided new ideas for journalistic stories (Parmelee 2014: 446). The qualitative approach of the study, however, did not provide additional evidence of which functions explain the journalistic use of political tweets.

The aim of this study is thus to investigate through a survey of journalists which functions of political tweets increase the likelihood that journalists use these tweets in their daily work. By using a political tweet we do not mean that journalists live tweet a political event or retweet a politicians’ tweet. Not the journalists’ Twitter use is the focus but how journalists use a politician’s tweet for the media coverage they produce, e.g. in print or in broadcast media. Although we can assume from the studies outlined above that Twitter can potentially influence journalistic work, research so far does not allow for any assumptions regarding which functions of political tweets explain why journalists use them in their coverage. The studies referred to here show that certain functions can be relevant such as a tweet being a trigger for a news story (Broersma and Graham 2012). However, there is no study as of yet which systematically explores which functions tweets must have for journalists so that they use them. Thus, we are not able to deduce any specific hypotheses on this matter. Therefore, we pose our first research question:

RQ1: What functions of political tweets explain their use by journalists?

At the same time, the use of political tweets by journalists is not exclusively influenced by the functions journalists ascribe to them. When studying agenda-building processes, the individual journalists’ environment needs to be taken into account (Denham 2010, Shoemaker and Reese 1996). Regarding the use of political tweets, it is not clear to what extent journalists’ Twitter use and their Twitter metrics play a role. Although other professional and individual characteristics of journalists (Shoemaker and Reese 1996), such as the type of medium they work for, are certainly relevant, their own individual Twitter network should influence the way they use politicians’ tweets in their reporting. If journalists are very active Twitter users, have many followers, and follow many other Twitter users (and, in this case, particularly politicians), it may be more likely that they also use political tweets more often. These Twitter metrics of individual journalists should be incorporated in order to analyze the significance of politicians in a journalist’s Twitter network for his or her work routines.

In studies on the journalistic use of Twitter, researchers usually either interview journalists about their social media and Twitter use without considering their actual Twitter metrics (Gulyas 2013; Hedman 2014; Hedman and Djerf-Pierre 2013) or study the tweets themselves (Artwick 2013; Broersma and Graham 2012; Lasorsa 2012; Lasorsa et al. 2012; Vis 2013) and their appearance in news outlets (Broersma and Graham 2012, 2013; Moon

and Hadley 2014). However, only the combination of survey data and Twitter metrics allows for a deeper understanding of agenda-building in the context of online communication. Therefore, it is yet unclear to what extent the journalists' actual use of Twitter and the connection with politicians in their Twitter network, as operationalized through their Twitter metrics, influence the journalists' use of political tweets for their work. The aim of this study is therefore to extend the research on agenda-building through Twitter by including the journalists' Twitter metrics.

RQ2: To what extent do journalists' individual Twitter metrics influence their use of political tweets?

Agenda-building in a broader sense means to consider potential reciprocal processes among the public, the media, and political actors (Cobb and Elder 1983; Kingdon 1995; Kioussis et al. 2013, 653). Studies following the broader approach showed that agenda-building not only implies influences from the political system on the media but also influences from the media on the political system, for example, the president (Fahmy et al. 2011). The media can also influence the political agenda (Walgrave and van Aelst 2006), not only through the media coverage but also through politicians being contacted directly by journalists (Kingdon 1995; Kovic 2015: 124-125).

Many studies, however, consider only one direction of influence—from the political system on the media content. At the same time, the emergence of online communication and its interactive features has the potential to change agenda-building processes. Interactive online media foster the notion of reciprocity as they allow dialogue and interaction among politicians, journalists, and citizens (Karlsen and Enjolras 2016; Kioussis et al. 2015: 366). This is also the case for Twitter. The interactive way in which Twitter works, with its replies, retweets, and mentions, creates a networked communication sphere in which recursive and reciprocal influences during the process of building an agenda for a certain issue are possible. Depending on journalists' and politicians' Twitter network, political tweets not only influence journalists but journalists may also perceive that they can influence politicians via Twitter. Against the background of the mediatization of politics (Schulz 2014) one can argue that the logic of online media – i.e. the different degrees of interactivity, reciprocity, transparency, and speed of information – changes politics and the relationship between journalists and politicians. There exists already some evidence for the reciprocal influence between journalists and politicians offline with journalists motivating politicians to float certain political issues (Kovic 2015).

Therefore, it is necessary to extend the study of agenda-building via Twitter by including the journalists' Twitter metrics and by assessing other directions of influence. During the agenda-building process it is not only relevant to study to what extent journalists are influenced by political tweets but also to what extent journalists can influence politicians through Twitter.

Since the analysis of this direction of influence would involve a survey of politicians it exceeds the possibilities of this study. However, a first step into that direction is an analysis of the influence the journalists perceive to have on politicians as this also captures changes in the relationship between journalists and politicians, hence on a slightly less tangible basis. If a strong connection between journalists and politicians on Twitter is a precondition for one direction of the agenda-building process, that is, the influence of politicians on journalists, then this tight network of journalists and politicians can also bring about perceived influences in the other direction: Journalists perceive they can influence politicians. Since we argue that Twitter as an interactive microblogging platform is an online medium which fosters these reciprocal relationships we ask:

RQ3: To what extent do journalists' individual Twitter metrics influence journalists' perceptions of having an influence on politicians via Twitter?

The Swiss Context

Switzerland is an interesting case for the analysis of journalists' use of politicians' tweets. On the one hand, it constitutes a special case. Most of the Swiss politicians at the national level are not full-time politicians but have non-political professions at the same time (Kriesi 2001) and have few resources. While usually professional political PR is regarded in agenda-building research as a politicians' means to influence the media agenda (Gandy 1982) many Swiss politicians do not have these means at their disposal. Therefore, Twitter is a cost-efficient way to disseminate their political views or information about their political activities and many of the members of the federal assembly use Twitter (Rauchfleisch and Metag, 2016). Although there are no figures on how many of the Swiss journalists use Twitter a study shows that journalists made up one of the largest groups among the followers of politicians on Twitter in Switzerland in 2013 (Rauchfleisch and Metag, 2016). In contrast, only 17% of the Swiss population uses Twitter (Latzer et al. 2015). Thus, although Twitter is still an elite network journalists and politicians are connected through the microblogging platform which makes the study of influences of politicians' tweets on journalists feasible. On the other hand, there are still many similarities to other countries which makes this study, albeit with limitations, generalizable. Like in many other countries (e.g. Artwick, 2013; Van der Haak et al., 2012) newsroom convergence in Switzerland has already changed journalistic working routines and twitter as a platform has gained in importance (Hofstetter and Schoenhagen 2016). With Switzerland belonging to the democratic-corporatist model of media systems (Hallin and Mancini 2004), the journalistic working routines with regard to Twitter identified in Switzerland should be representative for other countries with similar journalistic cultures. Against this background, Switzerland is a suitable case to examine the use of political tweets by journalists: Firstly, politicians may try and reach journalists via Twitter even more because most of them do not have many other resources. Secondly, the journalistic use of politicians's tweets in Switzerland should still be representative for other Western democratic countries with strong public-service broadcasting, high newspaper circulation, and professionalized journalism (Hallin and Mancini 2004). Even in countries such as the US, which differ in their media system compared to Switzerland, the results of this study should still be of interest since the use of Twitter is even more dominant in the US.

Method

Survey data

A standardized online survey of Swiss journalists was conducted in September 2014. As we were interested in the agenda-building process through Twitter, we focused on the potential influence of Twitter on the work of journalists who use Twitter and are connected with politicians on the microblogging platform. Thus, the population was defined as all journalists who work for a Swiss medium in Switzerland who had been contacted at least once by a Swiss politician (member of the National Assembly) via Twitter or followed at least one member of the Swiss National Assembly on Twitter ($N = 409$). These journalists were identified based on data from a preceding study and a publicly available list of Swiss journalists on Twitter (Bauer 2012). In total, the email addresses of 329 journalists were identified, and the survey questionnaire was emailed to them. A total of 143 journalists completed the survey (response rate = 43%) out of whom 23 had to be excluded from our analysis as they yielded missing cases for at least one of the variables we included in the

analysis. The following analysis is thus based on $n = 120$ cases (see Table 1 for an overview of the sample). The sample consisted of 83% male journalists, with an average age of 40 years, and most of them working for a print medium (43%). As our population is relatively narrow defined as journalists being on Twitter and being connected with a politician the characteristics of the population are difficult to discern. However, a recent study on Swiss journalists found that the typical Swiss journalists is male, around 40 years old and most of them work for a print medium (Dingerkus, Keel and Wyss 2016). Thus, we can assume that our sample represents Swiss journalists well enough.

The questionnaire differentiated between permanently employed and freelance journalists and was adapted to the different work routines where necessary.¹ It was provided in German and English in order to give journalists from the French- and Italian-speaking regions of Switzerland the opportunity to participate.

Twitter data

At the end of the survey, the journalists were given the opportunity to reveal their Twitter handle. Out of the 143 journalists, 59 provided their Twitter handle (41%). For this population, we retrieved their data from Twitter and combined them with the survey data. After the data had been collected, the data set was anonymized. With the help of the *R* software environment, we collected different Twitter data through Twitter's Search Application Programming Interface (API). First, basic information on all identified accounts was collected. Second, we gathered the accounts' follower-relationships; they can be either unidirectional or reciprocal. Statistical analysis and text mining were conducted within the *R* software environment.

Operationalization

Table 1 provides an overview of all dependent and independent variables and their descriptive statistics. The dependent variable for the analysis of RQ1 and RQ2 is the frequency of journalists' use of political tweets for their work: "How often do you use information from a Swiss politician's tweet for your journalistic work?" (1 = *never*, 5 = *very often*). By focusing on the aspect of journalistic work we tried to make sure that the journalists did not think of their own Twitter use (e.g. retweeting a politician's tweet) but of how often they use political tweets for the media content they produce. The dependent variable for the research question on the perceived influence of the journalists' Twitter use on politicians (RQ3) differentiated between politicians the journalists knew personally and those they did not know ("What do you think, to what extent does your own Twitter use as a journalist influence politicians you know personally/politicians you do not know personally?" (1 = *no influence at all*, 5 = *very strong influence*)). This differentiation makes sense as on Twitter unidirectional connections of people who do not know each other personally are common.

Independent variables that can influence the use of political tweets by Swiss journalists were drawn from existing studies on journalists' Twitter use. Parmelee's (2014) qualitative study showed that politicians' tweets are used by journalists if they can ascribe certain functions to the tweets. Following the functions of political tweets that journalists named in these interviews (Parmelee 2014), we asked: "To what extent would you agree with the following statements? Tweets by politicians... serve as generators of story ideas/ serve as tip sheets for events/ serve as places to find quotes/ provide access to a wide range of sources or viewpoints/ provide background information/ enable me to double-check information" (1 = *totally disagree*, 5 = *totally agree*).

Studies on which journalists adapt Twitter and how they use it showed that journalists' attitudes toward Twitter differ and are significant for their Twitter use (Hedman 2014). Therefore, what journalists think of Twitter in general was also relevant for the use of political tweets. This attitude was measured using four items adapted from Gulyas (2013): "When you think about your daily journalistic work, to what extent do you agree with the following statements? Twitter has increased the productivity of my work./ Twitter is a reliable

tool for sourcing a story./ News stories break first via Twitter./ Twitter will lead to the demise of the journalism profession” (1 = *totally disagree*, 5 = *totally agree*).

To what extent journalists perceive an influence through Twitter on their own work was also relevant. Measuring the perceived influence of Twitter on their work provided information about whether journalists are aware of a possible influence (“What do you think, to what extent does Twitter influence your daily journalistic work?” (1 = *no influence at all*, 5 = *very strong influence*)).

In addition, studies have shown that journalistic Twitter use is also dependent on structural and professional variables (Gulyas 2013; Hedman and Djerf-Pierre 2013; Rogstad 2013). We thus asked for what type of medium the journalist works (TV, radio, news magazine, newspaper, advertising paper, news agency, pure online medium, online edition of a print or broadcast medium), at which desk he or she was working (open question; meaning which topics he or she is mostly dealing with such as political desk, economy desk, etc.), and in which professional position (e.g., editor-in-chief, editor).

To ensure that the dependent variable indeed measured the use of politicians’ tweets by journalists, we also asked for the journalists’ general professional Twitter use to control for it (“How often do you use Twitter for professional purposes in your daily work as a journalist?” (1 = *never*, 5 = *very often*)).

In order to assess RQ2 and RQ3, the survey data were combined with the Twitter data. Twitter metrics were included as independent variables for RQ2 and RQ3. We measured the number of Swiss politicians as followers for each journalist, the number of Swiss politicians the journalists followed (followee), the journalists’ activity on Twitter as messages per day, and the number of replies and mentions from politicians the journalists received as well as the replies and mentions to politicians by the journalists. We included all politicians at the national and cantonal levels who were identified in a prior study. The variable replies and mentions to politicians by the journalists was measured for only 56 of the journalists as the period of three months (July–September 2014) before the survey was chosen to gather the data on replies and mentions.ⁱⁱ

Table 1 Overview of dependent and independent variables

	<i>M/ percentage</i>	<i>SD</i>	<i>N</i>
Independent variables			
<i>Attitudes toward Twitter</i>			
“When you think about your daily journalistic work, to what extent do you agree with the following statements?” (1 = <i>totally disagree</i> , 5 = <i>totally agree</i>)			
Twitter has increased the productivity of my work.	2.83	1.17	120
Twitter is a reliable tool for sourcing a story.	2.80	1.03	120
News stories break first via Twitter.	3.98	1.01	120
Twitter will lead to a demise in the journalism profession.	1.53	1.03	120
<i>Functions of tweets by politicians</i>			
“To what extent would you agree with the following statements? Tweets by politicians ...” (1 = <i>totally disagree</i> , 5 = <i>totally agree</i>)			
Serve as generators of story ideas	3.82	.98	120
Serve as tip sheets for events.	2.68	1.04	120
Serve as places to find quotes.	2.67	1.20	120
Provide access to a wide range of sources or viewpoints.	3.36	.99	120
Provide background information on current debates and issues.	2.81	1.15	120
Enable me to double-check information.	2.21	1.04	120
<i>Socio-demographics and professional variables</i>			120

Age	39.93	8.90	120
Gender (male)	83%	-	120
Online medium ^a	18%	-	120
Political desk	44%	-	120
Leading position	48%	-	120
Master's degree	77%	-	120
How often do you use Twitter for professional purposes in your daily work as a journalist? (1 = <i>never</i> , 5 = <i>very often</i>)	3.85	1.07	120
To what extent does Twitter influence your daily journalistic work? (1 = <i>no influence at all</i> , 5 = <i>very strong influence</i>)	3.29	.98	120
Actual Twitter Use (Twitter Metrics)			
Number of politicians as followers	51.25	42.94	59
Number of politicians the journalists follow (followees)	32.02	30.72	59
Activity: messages per day	2.43	3.07	59
Replies and mentions from politicians	5.24	17.87	59
Replies and mentions to politicians	4.88	11.82	56
Dependent variables			
How often do you use information from a Swiss politician's tweet for your journalistic work? (1 = <i>never</i> , 5 = <i>very often</i>)	2.40	.80	120
Perceived influence of journalists' own Twitter use on politicians they know personally (1 = <i>no influence at all</i> , 5 = <i>very strong influence</i>)	2.37	1.05	120
Perceived influence of journalists' own Twitter use on politicians they do not know personally (1 = <i>no influence at all</i> , 5 = <i>very strong influence</i>)	2.04	.95	120

^apure online medium and online edition of print or broadcast medium taken together

Results

That journalists and politicians are connected on Twitter is a precondition for agenda-building processes. Therefore, we measured to what extent journalists think of politicians as relevant contacts on Twitter ("How important is it to you to stay in touch with the following people/groups of people via Twitter?" 1 = *not at all important*, 5 = *very important*). Our data underscore that politicians are important contacts for journalists as politicians are one of the most important groups of people for Swiss journalists on Twitter ($M = 3.21$, $SD = 1.21$), along with the journalists' audience (e.g. readers) ($M = 3.56$, $SD = 1.16$) and other journalists ($M = 3.78$, $SD = 1.07$). The Twitter data revealed that journalists have many politicians as Twitter followers ($M = 51.25$, $SD = 42.94$) and follow many politicians ($M = 32.02$, $SD = 30.72$) (Table 1). Thus, the precondition that politicians and journalists are connected on Twitter was given so that agenda-building processes via the microblogging platform are possible.

Which functions of political tweets explain their use by journalists?

Based on the fact that politicians are relevant contacts for journalists on Twitter, we tested what kind of functions of political tweets explain their use by journalists. We used the entire survey sample ($n = 120$). Previous studies have shown that different functions of political tweets (Parmelee 2014) as well as structural variables of the journalists' professional environment (Gulyas 2013) can potentially impact the use of political tweets. In our study, these are the independent variables attitudes toward Twitter, the ascribed functions of political tweets, the perceived influence of Twitter on oneself, and sociodemographic and professional variables. Also, we controlled for the general professional use of Twitter.

Table 2 OLS Regression on the use of political tweets by journalists

	Dependent variable	
	Journalists' frequency of use political tweets	
	b (SE)	β
constant	-.416 (.57)	-
Age	.014 (.007)	.15
Gender (1=male)	-.064 (.153)	-.03
Education (1= Master's degree)	.004 (.133)	.00
Leading position (1= yes, 0= no)	-.044 (.12)	-.03
Political desk (1= yes, 0= no)	.257* (.12)	.16
Twitter use for professional purposes	.063 (.064)	.08
Twitter has increased the productivity of my work.	-.052 (.069)	-.08
Twitter is a reliable tool for sourcing a story.	.187** (.068)	.24
News break first via Twitter	-.111 (.064)	-.14
Twitter will lead to a demise in the journalism profession.	-.017 (.055)	-.02
Political tweets serve as tip sheets for events.	.116 (.061)	.15
Political tweets serve as places to find quotes.	.186** (.059)	.28
Political tweets provide background information on current debates and issues	.10 (.06)	.14
Political tweets serve as generators of story ideas.	.137* (.067)	.17
Political tweets enable me to double-check information.	.083 (.067)	.11
Political tweets provide access to a wide range of sources or viewpoints.	-.045 (.073)	-.06
Perceived influence of Twitter on oneself	.132 (.082)	.16
<i>N</i>	120	
<i>R</i> ²	.563	
adjusted <i>R</i> ²	.490	
* <i>p</i> <.05; ** <i>p</i> <.01; *** <i>p</i> <.001		

We ran an OLS regression with the journalists' frequency of use of political tweets as dependent variable. Table 2 depicts the regression model which explains 49% of the variance. The β values indicate the relative strength of the predictors in the model. None of the socio-demographic variables yield a significant effect. Of the professional variables, the variable covering journalists who work for the political desk is significant. If a journalist works for the political desk, i.e. mainly reports on political issues, it is more likely that he or she uses tweets by a politician for his or her work. This relationship is to be expected as political tweets are naturally much more relevant for the work of political journalists than for journalists covering other issues. Only one item that measured the journalists' attitudes toward Twitter is influential for the frequency of use of political tweets. If journalists think that Twitter is a reliable tool for sourcing a story, they use politicians' tweets more frequently.

Two of the six variables that measured the functions journalists ascribe to political tweets have a significant relationship with how often journalists use tweets by politicians for their work. If political tweets serve as generators for story ideas or can be used as quotes, it is

more likely that journalists will use the tweets. Regarding the strength of the relationship, particularly if the political tweets serve as quotes, this increases the likelihood of political tweets being used by journalists significantly.

To what extent do journalists' Twitter metrics explain their use of political tweets?

We analyzed the Twitter metrics of 59 of the journalists of the sample as they provided their Twitter handles. First, we made sure that this subsample did not significantly differ from the entire sample by conducting *t*-tests of the relevant independent and dependent variables. The tests were not significant; the only significant differences we found were for the variable of the perceived influence of journalists' own Twitter use on politicians they know personally. Journalists who provided their Twitter handles perceived the influence of Twitter on politicians they know as significantly higher than the entire sample. This must be considered when this variable is used.

We investigated to what extent the number of politicians the journalists follow (followers), the journalists' activity on Twitter (measured as messages per day), and the replies and mentions a journalist received from politicians influenced the frequency of the journalists' use of political tweets. The number of politicians a journalist followed as well as the replies and mentions a journalist received from a politician operationalize the likelihood and frequency of receiving messages from a politician, which can then be potentially integrated in journalistic media coverage. The journalists' activity on Twitter was included because the more active a journalist is, the higher the chances he or she will receive tweets from politicians. For example, if journalists have a Twitter account but do not use it actively, they are not likely to receive tweets from politicians.

For this analysis, we also conducted an ordinary least squares (OLS) regression (Table 3). None of the Twitter variables yielded a considerable effect on the use of political tweets by Swiss journalists. This analysis showed that for potential agenda-building processes it does not seem to make a difference to what extent journalists are in contact with Swiss politicians via Twitter and how active the journalists are.

Table 3 OLS regression of Twitter metrics on the use of political tweets by journalists

	Dependent variable	
	Journalists' frequency of use political tweets	
	b (SE)	β
constant	2.437*** (.211)	-
Activity: messages per day	.04 (.052)	.13
Number of politicians the journalists follow (followers)	-.002 (.004)	-.05
Replies and mentions from politicians	-.005 (.009)	-.10
<i>N</i>	59	
<i>R</i> ²	.015	
adjusted <i>R</i> ²	-.039	
* <i>p</i> <.05; ** <i>p</i> <.01; *** <i>p</i> <.001		

To what extent do journalists' Twitter metrics explain journalists' perceptions of having an influence on politicians?

In order to take the interactive character of Twitter and the broader concept of agenda-building in which reciprocal influences are possible into account, we investigated whether journalists perceive that they can influence political actors through Twitter. The journalists' Twitter metrics did not explain one direction of influence in the agenda-building process, that is, the influence of politicians on journalists. However, the extent to which journalists are embedded in a Twitter network with politicians may influence the extent to which journalists perceive they can influence politicians—and thus explain the other direction of influence from the media to the political system. We ran two separate OLS regressions with the dependent variables (a) the perceived influence on politicians the journalists know personally and (b) the perceived influence on politicians the journalists do not know personally (Table 4).

Again, we included the journalists' activity on Twitter as an independent variable because a journalist can be influential on this platform only if he or she uses Twitter actively. In contrast to the previous model, we included the variables number of politicians as followers and replies and mentions sent by the journalists to politicians as independent variables in the model. The rationale is that the more politicians are following a journalist, the more possible contacts the journalist has who he or she can influence. If a journalist tries to interact with a politician through replies and mentions, this can also affect his or her perception of influence as journalists cannot influence politicians via Twitter if they do not communicate with them.

Table 4 shows that none of the Twitter variables yield a significant effect on the perceived influence on politicians the journalists know personally. However, a weak relationship showed that the more politicians a journalist has as followers, the more he or she perceives an influence on politicians he or she does *not* know. This means that an influence via Twitter is perceived only on those politicians with whom the journalists do not have a personal relationship.

Table 4 OLS regression of Twitter metrics on the perceived influence of journalists'

Twitter use on politicians

	Dependent variable			
	Perceived influence of journalists' own Twitter use on politicians they know personally		Perceived influence of journalists' own Twitter use on politicians they do not know personally	
	b (SE)	β	b (SE)	β
constant	.2394*** (.237)	-	1.785*** (.202)	-
Activity: messages per day	.047 (.063)	.11	.045 (.054)	.12
Number of politicians as followers	.005 (.003)	.19	.006* (.003)	.28
Replies and mentions to politicians	-.01 (.013)	-.11	-.004 (.011)	-.05
<i>N</i>	56		56	
<i>R</i> ²	.054		.099	
adjusted <i>R</i> ²	.000		.047	
* <i>p</i> <.05; ** <i>p</i> <.01; *** <i>p</i> <.001				

Discussion

The aim of this study was to investigate why journalists use political tweets based on the ascribed functions of a tweet and the journalists' Twitter metrics. Therefore, we first inquired under what circumstances Swiss journalists use tweets written by Swiss politicians for their journalistic work, that is, using tweets as information subsidies.

It appears to be a precondition for journalists using political tweets that the journalists have a positive attitude toward Twitter and they think that it is a reliable tool for research. The more they believe in this, the more likely it is that they use political tweets. Although only journalists who are on Twitter were surveyed, this still appears to be a relevant influential factor. Some journalists may have a Twitter account but do not use it primarily for journalistic purposes and therefore do not include tweets from politicians in their work very frequently. Only if journalists think that Twitter is a reliable tool for journalistic research, an agenda-building influence through political tweets becomes possible.

The main aim of the study was to examine which functions journalists ascribe to tweets by politicians increase the likelihood of these tweets being used in journalistic work. One of the main functions of political tweets for Swiss journalists is that a tweet from a Swiss politician can give rise to a journalistic story. However, the strongest relationship appears if a political tweet can be easily quoted. Potential agenda-building effects through political tweets are most likely if tweets by politicians serve as places to find quotes. This is an interesting result as it reveals a discrepancy between the journalists' self-assessment of their Twitter use and the relationships we find in this study. When asked about the functions of political tweets, the journalists agreed most with the item that political tweets serve as generators of story ideas, which would mean that tweets motivate the journalists to investigate a news story by themselves. The tweet thus might have triggered the journalistic story, but the tweet's message must not necessarily be included in the media coverage after all. What the model revealed, however, is that tweets that serve as quotes are more important for the use in the journalistic work. This can be interpreted as in the end journalists choose the easier way by using tweets as quotes, which does not require further research. This finding underscores a stronger potential for agenda-building through political tweets as using them as quotes makes it more likely that the messages are included more or less unchanged in the media coverage.

This study extends research on agenda-building and Twitter through the combination of survey and Twitter data to adhere to a broader perspective on agenda-building processes and the interactive character of Twitter. The analysis of the journalists' Twitter metrics demonstrates that their connection to Swiss politicians on Twitter does not influence the journalists' use of political tweets. Combined with the results of the survey, this shows that the functions of the tweets themselves are important and not as much the frequency of how often a journalist receives them.

Last, this study strived to broaden the analysis of Twitter in agenda-building processes by analyzing not only the direction of influence from politicians on the journalists but also the potential influence of journalists on politicians through Twitter. It shows that such a recursive flow of influence between journalists and politicians via Twitter seems at least conceivable. The more politicians follow a journalist on Twitter, the more the journalist perceives an influence on politicians if he or she does not know them personally. This result has two implications. First, Twitter does not seem to play much of a role in influences between politicians and journalists who know each other personally. In a small country like Switzerland, journalists and politicians who know each other often communicate directly or through other channels (email, phone) instead of via Twitter (Kovic 2015). This also underscores the finding in Lecheler and Kruikemeier's (2015) overview in which they stated that in journalistic work routines online sources have not yet replaced offline sources. However, the result of the perceived influence on politicians they know personally needs to be interpreted with some caution. Since the journalists who provided their Twitter handle perceived a significantly higher influence on politicians they know than the rest of the sample this could be an indicator that those politicians take their Twitter use more seriously. If this is the case, however, it is even more surprising that their Twitter metrics, particularly their activity, does not explain this perception to some extent. Second, this finding shows that Twitter makes such reciprocal directions of influences more likely through its networked and

interactive characteristic. Thus, Twitter is a valuable extension to broaden the empirical study of agenda-building by also considering reversed influences—even if they are only perceived.

Typical of a pioneering study that combines survey and Twitter data, only a few important variables in the agenda-building process could be identified. Since this study was the first of its kind, such a result is not surprising. Future research should focus on the variables from our analysis that appear to be important and possibly include other variables that further investigate the perceived influence of journalists on politicians. One of these variables could be the use of direct messaging between journalists and politicians. Limitations of the study also derive from the sample of journalists, which was based on self-selection, and from differences of the Swiss context to other countries. Still, politicians and journalists in Switzerland, as the main groups in agenda-building processes, have a high adoption rate of Twitter and our results should be comparable in countries with similar journalistic cultures. Therefore, research in a different context could still draw on these results when focusing on agenda-building.

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ⁱ However, in the sample of n=120 journalists there was no freelancer among them.

ⁱⁱ We chose three months before the survey for gathering replies and mentions because it is a reasonable time span to discover possible effects. The longer the time period the less likely it is that possible effects can be explained. The Twitter data was downloaded in January 2015. Some of the 59 journalists wrote more than 3200 messages in the last few months, therefore their tweets from 2014 could not be downloaded through the API.